3.1 Geographical background to Sand | Karen Hardy & Caroline Wickham-Jones with Mike Cressey

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3.1.1 Introduction

Illus 315: Location map of Sand, contours at 10m intervals

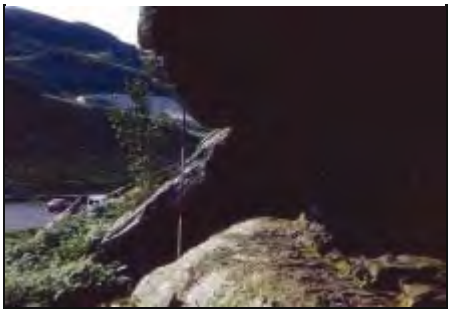
The rock outcrop at Sand lies some 500m back from the sea, at the head of a small sandy bay on the west-facing coast north of Applecross (see Illustration 315, right). The shelter is an old sea cave that sits at a height of 27.7m above sea-level (asl) and faces north-east (see Illustration 316, below left. The island of Raasay lies across the Inner Sound behind Sand, with Skye in the background). It is shallow (see Illustration 317, below mid left. The site of SFS 96, Meallabhan, lies on the dune in the bay in the background), with considerable evidence of previous roof-fall, apparently prior to its use in the 7th millennium BC. The overhang today measures less than 3m deep at its maximum point; it is high enough for an adult to stand upright, and this is likely to have been similar in the past. Inside the shelter, dry sandy soil mixed with sheep faeces lies in a thin layer over bedrock and there is no archaeological preservation (see Illustration 318, below mid right).

Illus 23: Distinct vegetation in front of the rockshelter at Sand in July

Outside the shelter, a gently sloping apron of land extends for some 20m, before dipping sharply down a craggy incline to a small burn that runs to the sea (see Illustration 319, below right. The slope of the apron may clearly be seen towards the left of the picture). This is likely to have formed the closest fresh water supply in prehistory; it is a short, steep walk uphill from the burn to the shelter. In spring the gentler slope of the apron is covered with close cropped turf; in summer a dense growth of bracken appears. There are surface indications that the apron may have been cultivated in times past. Even today the vegetation of the apron stands out sharply from the surrounding heather-clad moorland, though there is nothing to indicate the presence of midden deposits just below the surface across a part of it (see Illustration 23, right. The location of the apron is clearly to be seen but there is no indication of the midden deposits close to the rockshelter).

Illus 316: The rockshelter at Sand from the cliffs to the east

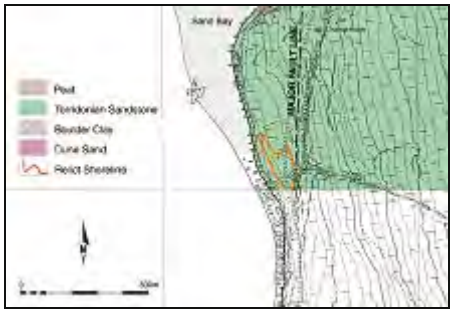
Illus 317: The rockshelter at Sand from the north



Illus 318: Interior of the rockshelter at Sand

Illus 319: Deturfing work across the apron in front of the rockshelter at Sand

3.1.2 Geology



Illus 321: Map of Sand area showing solid & drift geology

The outcrop itself is made of calcium-rich sandstone in common with the Torridonian sandstones that dominate the Applecross peninsula and it is capped with peat (see Illustration 320, top right. Excavation was carried out on the apron infront of the rockshelter. The heather-covered peat capping to the rockshelter may be seen). The top of the outcrop lies at an altitude of about 36m asl. On the opposite side of the bay, a north-east—south-west trending fault line has uplifted the sandstone into an extensive cliff that rises to over 300m and overlooks the Sand rockshelter site (see Illustration 321, left, drawn by Mike Cressey). Towards the coast, the main lithology is marine alluvium and glacial till which is in turn covered by Holocene peat that varies in depth according to local topography. On the south side of Sand Bay, a spectacular migrating dune system rises against the sandstone cliff (see Illustration 322, bottom right. Also showing the site of SFS 96, Meallabhan). East of the Sand rockshelter, the valley is filled with fluvioglacial till where poorly sorted glacial sand, clay and gravels are extensive. Large, rounded boulders and cobbles are exposed within the base of a barrow pit opened up to build the nearby carpark and in the valley floor the deposits were noted to be rich in quartz pebbles, possibly a local source of raw material for tool manufacture in prehistory. Tertiary activity is represented by a series of east—west trending basalt dykes which are well exposed within the cliff overlooking the rockshelter.

Illus 320: Outcrop at Sand during excavation

Illus 322: Bay at Sand with the dunes on the south side

3.1.3 Geomorphology

Illus 323: Track cutting across the platform to the west of the rockshelter at Sand

A track leads westwards away from Sand Bay to an old Royal Navy establishment on the coast to the north of the bay, and alongside this track lies a terrace associated with the Late Glacial Shoreline which extends northwards as a more distinct sinuous platform overlooking a level area leading to the sea (see Illustration 323, left. In the background lie the mountains of Skye, on the other side of the Inner Sound). The present shoreline consists of a rock platform with deep gullies formed as a result of continued erosion, the coast being exposed to wave impact from westerly and south westerly winds.

Illus 324: Close-up of the rocks along the outcrop at Sand

Dawson's research conducted as part of SFS indicates that the rockshelter itself was initially cut by marine action during the melting of the last (Late Devensian) ice sheet at a time when actual sea-level was in fact lower than it is today, but when the land lay even lower due to the weight of ice that had recently lain upon it (see Dawson, Section 7.1).

Since its emergence, the outcrop has been constantly weathered by the wind. The bedding planes within the sandstone trend north—south and continued attrition has lifted out the weaker areas within the beds (see Illustration 324, right). Cracks within the rockface have been further affected by freeze-thaw processes leading to frost-shattering and continued rockfall. This is attested by the talus slope running down from the mouth of the shelter. The talus consist of angular fragments of sandstone intermixed with soil derived from cover vegetation.

The wider geology and environment of the site and the Applecross peninsula are presented in detail by Shiel in Section 8.2.

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